



RESEARCH DEPARTMENT

THE SERVICE AREA OF THE LES PLATONS V.H.F. SOUND TRANSMITTERS (1962)

Report No. K-157

(1962/46)

**THE BRITISH BROADCASTING CORPORATION
ENGINEERING DIVISION**

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October 1962

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SUMMARY

This report gives the results of a field strength survey of the v.h.f. sound transmissions radiated from Les Platons in Jersey and Guernsey. Most of Jersey gets a satisfactory service, but about one fifth of the island of Guernsey is not served. An Engineering Information Department (E.I.D.) survey showed that the v.h.f. service in Sark from Les Platons is satisfactory but Alderney is not served.

1. INTRODUCTION

The Stockholm 1952 Plan for v.h.f. sound broadcasting assigned to the Les Platons station the three frequencies 91.1 Mc/s, 94.45 Mc/s and 97.1 Mc/s and permitted an effective radiated power (e.r.p.) of up to 10 kW in any direction on each channel. As a result of the Stockholm 1961 Plan, which makes provision for stereophonic and local broadcasting, the frequencies allocated for the Les Platons transmitter were 91.1 Mc/s, 89.5 Mc/s and 97.1 Mc/s with 94.7 Mc/s allocated as a possible stereophonic channel. All these channels are subject to a 1 kW restriction over the sector 090° to 150°. For the 89.5 Mc/s channel only there is a restriction of 0.25 kW over the sector 210° to 250°.

When the Stockholm 1961 Plan was announced (June 1961) the transmitters and an omnidirectional aerial giving an e.r.p. of 3.1 kW were being installed at Les Platons and the service was scheduled to start in a few months. It was not possible in the time available to design and install a new aerial to meet the new and severe restrictions imposed by the 1961 Plan and it was therefore decided to start the service on a reduced e.r.p. of 0.8 kW. These conditions met our obligation under the 1961 Plan provided that, by 1st January 1963, the 94.45 Mc/s frequency was changed to 94.7 Mc/s. It was also decided that no further action be taken until the results of reception tests and a field strength survey were available. This report gives the results of the survey.

2. GENERAL

The Les Platons v.h.f. sound service opened on 16th October 1961 using the frequencies assigned under the Stockholm 1952 Plan, the Light, Third and Home programmes being radiated on frequencies of 91.1 Mc/s, 94.45 Mc/s and 97.1 Mc/s respectively.

The station is equipped with three 2×1 kW transmitters and a four-tier unipole-V aerial mounted 120 ft (36.6 m) above ground level. For this condition the mean e.r.p. is 3.2 kW but for the reasons given in the introduction only one transmitter for each channel drives one half of the aerial and the e.r.p. is 0.8 kW.

3. RESULTS

The results of the survey are presented in two field strength maps, Fig. 1(a) Guernsey and Fig. 1(b) Jersey. The field strength values for 10%, 50% and 90% of the locations in the towns and villages are given in the Appendix. Throughout the report all field strengths are quoted in decibels relative to $1 \mu\text{V/m}$ ($\text{dB}(\mu\text{V/m})$).

The service provided in Jersey is, in general, satisfactory. Small areas of the principal town, St. Helier, are, however, not adequately served, 2% of the locations receiving a signal of less than 48 $\text{dB}(\mu\text{V/m})$. The only other centres of

LES PLATONS

Band II
(MEASURED)

SITE HEIGHT: 440 ft (134 m) A.M.S.L.

AERIAL HEIGHT: 120 ft (36.6 m) A.G.L.

MEAN E.R.P.: 0.8 kW

POLARIZATION: HORIZONTAL

AERIAL: FOUR TIER UNIPOLE - V

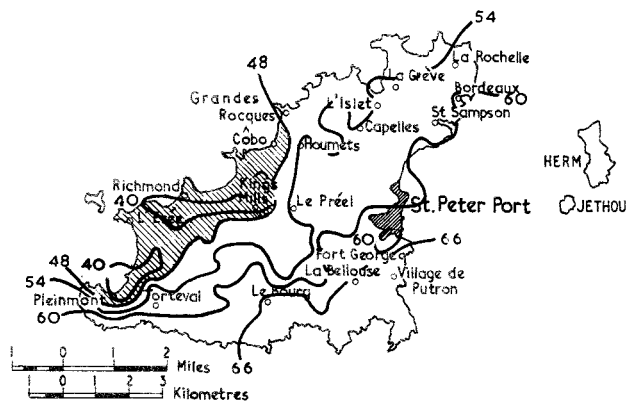


Fig. 1(a) - Guernsey

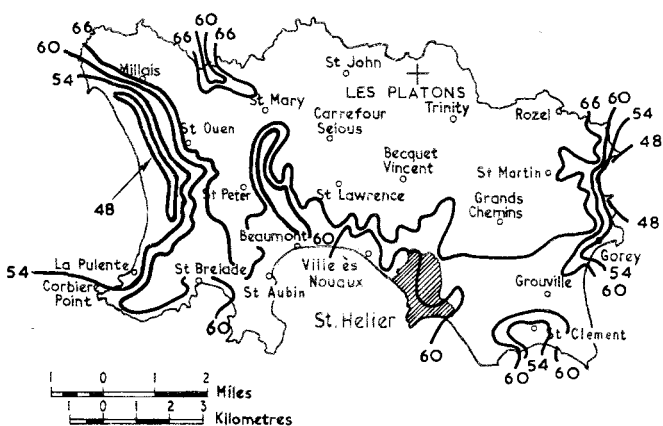
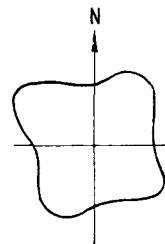


Fig. 1(b) - Jersey



H.R.P. AERIAL SECTION DRG. No. AE.611

Note

The contours represent the field strength in decibels (dB) relative to $1 \mu\text{V/m}$ at 30 ft (9.1 m) above ground exceeded at 50% of receiving sites in a given locality. The value exceeded at 90% of receiving sites may be as much as 10 dB below the value indicated by the contours particularly in hilly and built-up areas.

population not getting a satisfactory service are Gorey and St. Brelade, 30% of the former and 2% of the latter receiving field strengths of less than 48 dB(μ V/m). With these exceptions the island is getting a satisfactory service.

In Guernsey, the only densely populated area is St. Peter Port, the principal town. It is well served, 90% of the locations having a field strength value greater than 53 dB(μ V/m). The rural population is also well served, except for those people living in a 1 to 2 miles (1.6 to 3.2 km) wide strip on the north-west coast. This area, shown hatched on Fig. 1(a), receives a field strength of less than 48 dB(μ V/m) and includes the villages of Kings Mills, Mont Saint, Perelle and Pleinmont, where the median field strength is even less than 40 dB(μ V/m).

The field strength survey covered the two principal islands only. The E.I.D. survey also included Sark and Alderney, and their report shows that the service in the former is adequate but it is unsatisfactory in the latter.

From population figures provided by E.I.D. it is estimated that, of the total population of Jersey (63,000), 700 in St. Helier, 300 in Gorey and 100 in St. Brelade are receiving less than 48 dB(μ V/m). In Guernsey, with a total population of 45,000, the badly served coastal strip has a population of 3,700. Alderney's population numbers 1,472. In all, the population of the Channel Isles receiving a median field strength of less than 48 dB(μ V/m) is therefore approximately 6,500.

4. CONCLUSIONS

While the Les Platons v.h.f. sound transmitters, each radiating 0.8 kW, provide a satisfactory service to most listeners in the Channel Isles, there are areas in which it is inadequate. In particular the whole of Alderney and part of Guernsey are in need of an improved service and consideration is now being given to the best means of attaining this.

APPENDIX

Les Platons Band II Survey: Guernsey

Place	Field Strength in dB(μ V/m)			Place	Field Strength in dB(μ V/m)		
	10%	50%	90%		10%	50%	90%
Les Arquets	43.0	40.5	37.5	Le Marais	55.5	53.5	49.0
Bailiff's Cross	68.0	64.5	60.0	Les Marchez	67.0	62.0	60.5
La Bellouse	70.0	66.0	63.0	Les Mielles	60.0	58.0	53.0
Bordeaux	69.0	61.5	55.5	Mont Saint	44.0	33.5	31.5
Le Bourg	70.5	67.5	64.5	Le Mont Durand	65.5	63.5	61.0
Les Buttes	63.5	58.0	52.0	Mouilpied	66.0	59.5	52.0
Capelles	65.0	63.0	59.5	Niaux	52.5	48.5	45.0
Carteret	55.5	51.5	48.5	La Passée	51.5	47.5	44.5
Côbo	49.0	46.5	43.5	Perelle	43.0	38.0	34.0
Contrée des Clercs	57.0	52.0	47.5	Pleinheume	60.0	55.5	53.5
Croix Bertrand	73.5	68.5	64.5	Pleinmont	43.5	31.5	25.5
Les Effards	63.0	57.5	50.5	La Pomare	51.5	46.5	42.0
L'Erée	47.0	43.5	38.5	Le Préel	62.0	56.5	53.5
La Fontenelle	60.5	58.0	42.5	La Ramée	61.5	57.5	53.0
La Fosse	71.5	68.0	63.0	Richmond	47.0	43.0	35.5
Four Cabot	60.0	57.5	53.0	La Rochelle	63.0	58.5	55.0
Goubey's	60.5	57.0	54.5	La Roussailerie	62.5	56.5	49.5
Grandes Rocques	58.5	53.5	51.0	Les Rouvets and Annevilles	59.0	57.0	55.5
La Grève	60.5	54.5	50.0	Les Sages	62.0	58.5	56.0
Le Gron	56.0	49.5	48.0	Saltpans	56.0	53.5	50.5
Hall	51.5	47.5	43.5	Les Simons	66.5	62.5	59.5
Houges des Doréys	58.5	53.0	49.0	St. Peter Port	66.5	60.5	53.5
Houmets	61.0	55.5	49.0	St. Sampson	62.5	55.5	52.5
Les Hubits	73.0	68.5	65.0	Sous L'Eglise	51.0	46.5	42.5
Les Huriaux	66.0	62.5	59.5	Tertre	58.5	56.5	52.5
L'Islet	56.5	54.0	50.5	Village de Putron	78.0	73.5	71.5
Jerbourg	85.0	73.5	64.5	La Villiaze	68.0	63.0	60.0
Kings Mills	49.0	37.0	34.5	La Villette	67.0	64.0	59.5
Les Landes (N)	59.0	54.5	50.0	Le Villocq	59.0	55.5	51.0
Les Landes (S)	69.0	64.0	59.5	Vimiera	66.5	54.5	50.5
Les Lohiers	55.5	49.5	39.5				

Les Platons Band II Survey: Jersey

Place	Field Strength in dB(μ V/m)			Place	Field Strength in dB(μ V/m)		
	10%	50%	90%		10%	50%	90%
Beaumont	66.0	63.0	60.0	Red Houses	75.0	71.0	67.5
Le Bourg	64.5	61.0	57.0	Rozel	89.0	72.0	62.5
Carrefour Selous	82.0	78.5	72.0				
Le C��tel	83.5	77.5	70.0	Samar��s	70.0	66.0	61.0
Les Croix	97.0	93.5	88.0	St. Aubin	77.0	65.5	55.5
L'��tac	41.5	34.5	27.0	St. Brelade's Church	60.0	55.5	51.0
Faldouet	76.5	73.0	70.0	St. Clement's Church	55.5	50.5	43.5
Five Oaks	77.0	73.0	69.0	St. Helier	65.0	57.5	51.5
La Fontaine	74.0	69.5	67.5	St. John's Church	90.0	86.5	81.0
				St. Martin's Church	80.0	75.5	70.0
Gorey	60.0	51.5	42.5	St. Mary's Church	80.5	75.5	71.5
Grands Chemins	85.5	80.0	75.0	St. Ouen's Church	70.5	66.5	60.5
Le Grouet	64.5	61.5	48.5	St. Peter's Church	76.5	72.5	68.5
Grouville	68.5	62.5	56.5	St. Saviour's Church	77.5	74.5	69.5
The Grove	79.5	75.5	72.5				
Le Haguais	66.5	59.0	51.5	Trinity Church	97.0	90.5	81.0
Le Hurel	67.0	63.5	58.0	Trois Bois	81.0	77.5	73.5
Millbrook	65.0	56.5	51.5				
Les Pali��res	77.0	71.5	62.0	Ville ��s Nouveaux (N)	88.5	83.5	79.0
Pontac	63.5	58.0	54.0	Ville ��s Nouveaux (S)	65.0	53.5	50.0
La Pulente	53.5	49.5	43.0	Ville des Quennevais	65.0	61.0	56.5
				Ville ��s Renauds	64.0	61.5	56.0